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ABSTRACT

This study of handicapped and non-handicapped preschool and early elementary school children and their older normal siblings was designed to determine (1) the intercorrelation of parent and teacher ratings of the child's academic competence and social adjustment, and (2) the correlations of mother, father and teacher ratings with the child's diagnosis of handicapped or normal. Two samples of families were studied. Sample A consisted of 36 two-parent families with a child aged 3 to 6 and at least one older child. In half the families the preschool child was identified as having a mild to severe handicap. Sample B consisted of 52 families with a child aged 3 to 8 and both parents in the home. Thirty-five of the families had an older sibling and in 39 cases the target child was referred as handicapped by a preschool, public school or special school. Teachers rated each child's behavior in the classroom using the Classroom Behavior Inventory (CBI), Bipolar Trait Ratings (BTR), the Social Assets Inventory (SAI), and a Teacher Report of Child Behavior Toward the Teacher Inventory. Mothers and fathers also completed the BTR, the SAI, and a Parent Report of Child Behavior Toward the Parent Inventory. In general, correlations between parent ratings and teacher ratings were substantial on the dimension of academic competence and were lower and marginally significant on the dimension of socialization and temperament. Results suggest that parents as well as teachers might contribute significantly to developmental screening. (The short form of the Social Assets Inventory and the traits rating scale, accompanied by scoring forms, are included. (Author/MP)

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Evidence of Parent and Teacher Validity in Screening for Handicaps

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Interest in the early detection and remediation of developmental problems (Frankenburg and North, 1974) has contributed to the increasing number of methods for "Screening Growth and Development of Preschool Children" (Stangler, Huber, and Routh, 1980). Many of these methods must be administered by professionals either through testing the child or by interviewing the parent about specific developmental achievements. Substantial correlations of teacher ratings of classroom behavior of kindergarten children with mental ability and academic achievement tests support the validity of teacher ratings (Schaefer and Edgerton, 1979a). This study of handicapped and non-handicapped preschool and early elementary children and their older normal siblings was designed to determine the intercorrelations of parent and teacher ratings of the child's academic competence and social adjustment and the correlations of mother, father and teacher ratings with the child's diagnosis of handicapped or normal. A major goal was to determine the validity of parent and teacher ratings in screening for children with handicapping conditions.

Samples:

Sample A consisted of 36 two-parent families with a child aged three to six and at least one older child. In half the families the preschool child was identified as having a mild-to-severe handicap with a biomedical basis. All of the preschool children were enrolled in a day care or nursery school program.

Sample B consisted of 52 families with a child aged three to eight and with both parents in the home. Thirty-five of the families also had an older sibling. In 39 cases the target child was referred as handicapped by

preschools, public schools or special schools, or by the North Carolina Developmental Evaluation Clinics (N. C. DECs). The normal children were chosen randomly from classrooms whose teachers elected to participate. Some handicapped children who had received services from the N. C. DECs had largely overcome their developmental problems while at least three older siblings were reported by their parents to have handicaps which had led to special placement or retention in grade. In one case the etiology of the handicap appeared to be primarily socio-cultural rather than biomedical. Thus the handicapped children in Sample B had borderline through severe handicaps and three of the normal siblings had borderline or mild handicaps.

In Sample A socio-economic status of the families with handicapped children differed significantly from socio-economic status of families with normal children. However, in Sample B there were no significant differences between families of handicapped and normal children on income, education, and father's occupation, with both subsamples including a wide range of socio-economic status levels.

Methods:

Teachers described the child's behavior in the classroom with (1) the Classroom Behavior Inventory (Schaefer and Edgerton, 1978a) with scales for verbal intelligence, task-orientation, curiosity/creativity, extraversion, independence and considerateness, (2) Bipolar Trait Ratings (Schaefer and Edgerton, 1978b) with scales for intelligence, task-orientation, extraversion and considerateness using a format developed by Becker (1960), (3) a Social Assets Inventory (Schaefer and Edgerton, 1979b) with scales of expressive talent, physical coordination, relations with adults, appearance and health, and (4) a Teacher Report of Child Behavior Toward the Teacher Inventory. Mothers and fathers also completed the Bipolar Trait Ratings, the Social Assets Inventory, and a Parent Report of Child Behavior Toward the Parent Inventory. Demographic data and data on the

child's diagnosis were also collected as part of this study of adaptive behavior of handicapped and normal children at home and at school.

Data Analyses:

Scales that describe the child's behavior were intercorrelated and factor analyzed for fathers and mothers and for teachers for each of the two samples. Factor scores that describe major dimensions of child adaptation at home and at school and scale scores on the Social Assets Inventory and Bipolar Trait Ratings of fathers, mothers and teachers were intercorrelated to determine the extent of agreement on the child's adaptation. The scores were also correlated with the child's group membership--handicapped versus non-handicapped--to determine which descriptions of child behavior are most related to the child's diagnosis.

Results:

Each of the independent factor analyses for the two samples and for parents and teachers revealed a major dimension of academic competence with substantial factor loadings on intelligence from the Bipolar Trait Ratings, on expressive talent from the Social Assets Inventory and on verbal intelligence on the Classroom Behavior Inventory for teachers. Other scales that have substantial factor loadings, including task-orientation and physical coordination, support a label of competence that is best defined by ratings of intelligence. A second major dimension had loadings on considerateness and negative loadings on the child's hostile aggressive behavior and resistance to parent or teacher. The third general factor that was similar for parents and teachers described an outgoing expressive, pattern of high interaction with the adult that might be interpreted as extraversion versus introversion. The three dimensions provide further evidence for the conceptual model shown in the Figure (Schaefer, In Press).

The intercorrelations of the scores of fathers, mothers, and teachers for the major dimensions of competence, considerateness and extraversion supported

a hypothesis that the parent and teacher factors describe similar patterns of behavior. The intercorrelations reported in Table 1 show higher correlations between mother and father descriptions than between either parent and the teacher. Substantial correlations are seen between parent ratings and teacher ratings on the dimension of competence and lower and marginally significant correlations for the dimensions of socialization and temperament. These findings were replicated in Samples A and B and in the independent analyses of the younger handicapped and normal children and of the older normal siblings.

These findings are supported by intercorrelations of scale scores on the Social Assets Inventory and on the Bipolar Trait Ratings of mother, father and teacher reported in Tables 2 and 3. Again the correlations between mother and father are higher than between parent and teacher, and the highest correlations are for the variables that define the major factor of competence--intelligence, expressive talent, physical coordination, and task-oriented behavior. Unreported separate analyses for the younger children that included both normal and handicapped children and for older normal siblings showed similar levels of correlation among informants.

Correlations of the factor scores for competence, considerateness versus hostility, and extraversion with the dichotomous variable of handicapped versus non-handicapped reported in Table 4 revealed that handicap is substantially correlated with lower competence, with higher correlations for Sample A that included a higher proportion of moderately and severely handicapped children than for Sample B. The correlations are somewhat higher for mothers and fathers than for teachers. Table 5 that reports correlations of specific scales with the dichotomous variable of handicapped versus non-handicapped strongly supports a conclusion that competence ratings are substantially correlated with the diagnosis of handicap while social adjustment ratings have low and insignificant correlations with handicap. Each of the scales that have substantial loadings on the

dimension of competence--expressive talent, intelligence, physical coordination, and task-orientation--have significant correlations with the diagnosis of handicap while the scales that have major loadings on the dimensions of considerateness versus hostility and extraversion tend to have low and often insignificant correlations with the diagnosis of handicap.

Discussion:

The consistent findings of high correlations between parents and teachers on variables that define the child's competence--intelligence, expressive talent, task-orientation, and physical coordination--and the substantial correlations of these variables with a diagnosis of a handicapping condition suggests that parents as well as teachers might contribute significantly to developmental screening. The methods that have been used require parent and teacher judgments of the child as compared to other children in an age cohort. The findings show that parents can report that the child is not making developmental gains that are typical for an age cohort without reporting specific developmental achievements. This evidence that parents might contribute to screening, combined with other findings that parents can contribute significantly to diagnosis and treatment of the developmental disorders of their children (Reichler and Schopler, 1976), supports the need for more parent-centered approaches to the delivery of health services to children. Caretakers and teachers might also contribute to screening of children enrolled in child care or education programs.

Scales of the Bipolar Trait Ratings and the Social Assets Inventory that have major loadings on the dimension of competence also have significant correlations with a diagnosis of handicapped. These methods that can be completed in less than five minutes might be useful in implementation of the Child Find provisions of PL 94-142 or in parent and teacher involvement in developmental screening in the EPSDT program. Although data were collected from mother, father, and teacher in this study, each of these informants might provide data that would

contribute to identification of children in need of developmental services. Although it was possible to develop cutoff scores for the scales of expressive talent and physical coordination of the Social Assets Inventory that differentiated severely and moderately handicapped from normal children, variability within both diagnosed and undiagnosed children suggested that it is more useful to recognize a continuum of degrees of handicap. It is also possible to differentiate physical and motor handicaps that can be identified by scores on physical coordination from cognitive handicaps that can be identified by ratings of expressive talent and intelligence.

Although parent and teacher ratings of social adjustment have relatively low correlations with one another, mothers and fathers are in higher agreement on the child's social behavior. Social adjustment variables are not useful in screening for the types of handicapping conditions that were included in this sample but social adjustment variables are more useful in screening for mental health problems (Humphreys, 1979; Schaefer, In Press). Other studies that have also found relatively low correlations between parent and teacher reports of child social adjustment (Becker, 1960; Rutter, Tizard and Whitmore, 1970; Humphreys, 1979) also suggest that the child's social adjustment may vary in different social contexts. Lower correlations between mother and father on social adjustment variables than on competence variables also support a hypothesis that an adult's view of the child's social adjustment is influenced by the specific adult-child relationship. Further research on the stability and correlates of the child's adjustment at home and at school is needed to determine the significance of the social adjustment dimensions for the child's adaptation.

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Figure
A Configurational Model for Adaptive Behavior and Diagnostic Constructs

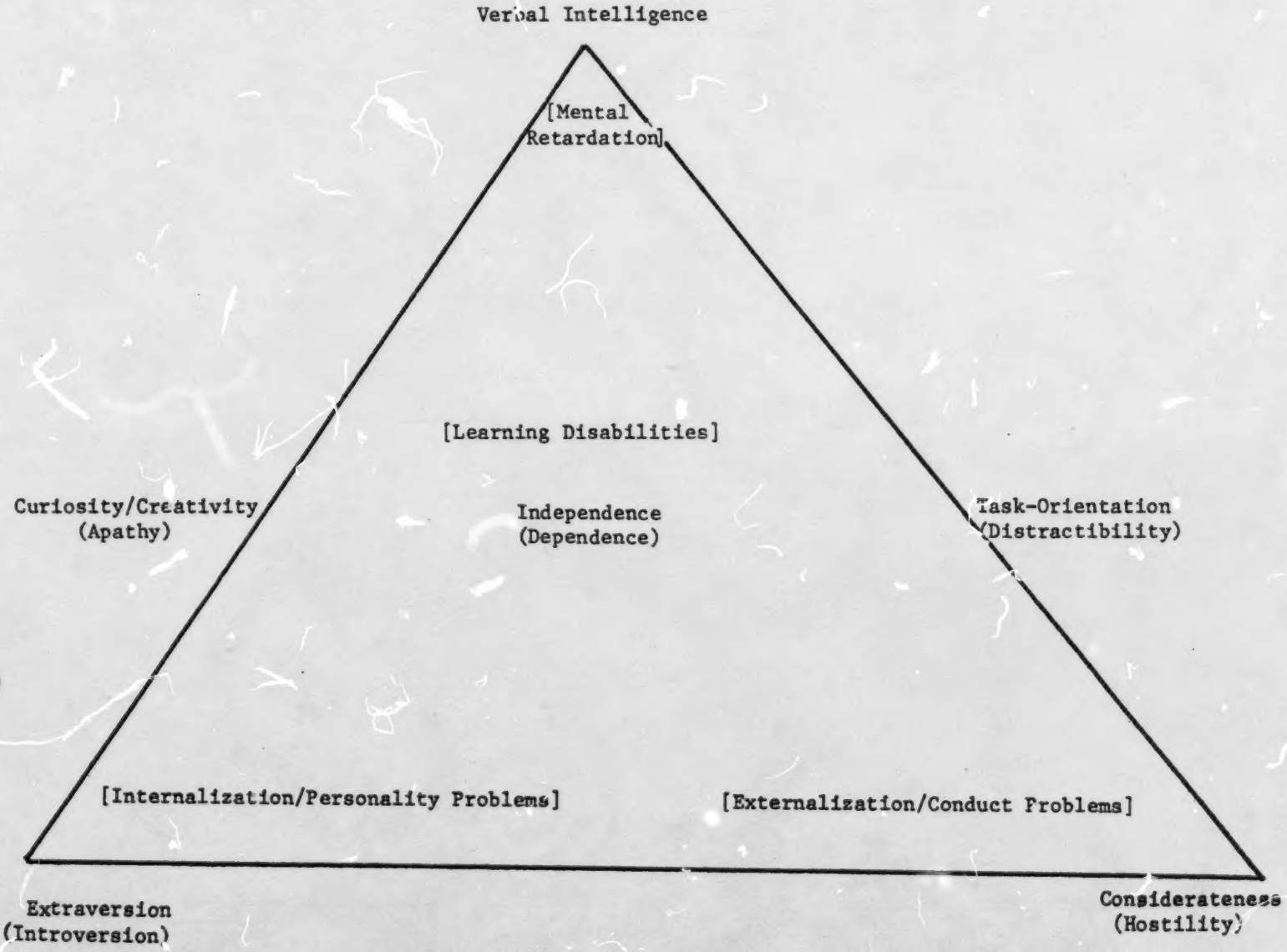

Table 1

Correlations Among Factor Scores of Mother, Father, and Teacher

Sample A

	Correlations					
Informants:	Mother-Father		Mother-Teacher		Father-Teacher	
Child:	Younger	Older	Younger	Older	Younger	Older
Dimensions:	N=25	N=28	N=30	N=25	N=26	N=29
Competence	.92**	.76**	.65**	.60**	.66**	.51**
Considerateness	.47*	.60**	.39*	.19	.22	.23
Extraversion	.59**	.40*	.49**	.39	.40	.34

Sample B

	Correlations					
Informants:	Mother-Father		Mother-Teacher		Father-Teacher	
Child:	Younger	Older	Younger	Older	Younger	Older
Dimensions:	N=42	N=31	N=36	N=23	N=35	N=23
Competence	.78**	.70**	.70**	.72**	.53**	.77**
Considerateness	.40**	.56**	.30	.37	.26	.23
Extraversion	.54**	.39*	.43**	.28	.42*	.39

* $p<.05$
** $p<.01$

Table 2

Correlations Among Social Assets Inventory Scale Scores of Mother, Father, and Teacher

Sample A

Scales:	Mother-Father N=54	Mother-Teacher N=54	Father-Teacher N=54
Expressive Talent	.77**	.76**	.69**
Physical Coordination	.79**	.64**	.58**
Relations with Adults	.43**	.52**	.47**
Appearance	.48**	.17	.17
Health	.46**	.33*	.18

Sample B

Scales:	Mother-Father N=78	Mother-Teacher N=61	Father-Teacher N=62
Expressive Talent	.74**	.69**	.51**
Physical Coordination	.80**	.58**	.65**
Relations with Adults	.67**	.25	.24
Appearance	.68**	.20	.29*
Health	.48**	.03	.09

* $p < .05$
** $p < .01$

Table 3

Correlations Among Bipolar Trait Rating Scale Scores

of Mother, Father and Teacher for Sample B

	Mother-Father N=74	Mother-Teacher N=60	Father-Teacher N=61
Scales:			
Intelligence	.82**	.80**	.66**
Task-Orientation	.63**	.53**	.37**
Extraversion	.48**	.32*	.33*
Considerateness	.39**	.25	.26*

Table 4

Correlations of Factor Scores of Mother, Father and Teacher

with Diagnosis of Handicap

Sample A

	Mother N=55	Father N=57	Teacher N=67
Dimensions:			
Competence	-.71**	-.73**	-.54**
Considerateness	.16	.29*	-.03
Extraversion	.11	-.13	-.01

Sample B

	Mother N=81	Father N=75	Teacher N=66
Dimensions:			
Competence	-.58**	-.54**	-.38**
Considerateness	-.10	-.17	-.01
Extraversion	-.12	-.05	-.12

* $p<.05$
** $p<.01$

Table 5

Correlations of Scale Scores

of Mother, Father and Teacher with Diagnosis of Handicap

	Sample A			Sample B		
	Mother N=62	Father N=62	Teacher N=68	Mother N=82	Father N=79	Teacher N=67
Social Assets Inventory:						
Expressive Talent	-.67**	-.70**	-.66*	-.55**	-.57**	-.44**
Physical Coordination	-.69**	-.73**	-.65**	-.49**	-.44**	-.47**
Relations with Adults	-.10	-.34**	-.23	.02	.02	-.14
Appearance	-.43**	-.28*	-.15	-.21	-.21	-.21
Health	-.41**	-.36**	-.19	-.15	-.21	-.19
Bipolar Adjective Ratings:	N=63	N=63		N=82	N=77	N=67
Intelligence	-.72**	-.66**		-.51**	-.51**	-.46**
Task-Orientation	-.44**	-.41**		-.45**	-.36**	-.24*
Considerateness	.01	.01		-.03	-.10	-.21
Extraversion	.08	.00		-.06	-.26	-.08

* $p<.05$
** $p<.01$

1 1 1 3
(1-4)

SOCIAL ASSETS INVENTORY
Short Form, July 1979

ID ___
(5-7)

Earl S. Schaefer and Marianna Edgerton

Please rate the child on the following talents, abilities, and physical features by circling the number you consider most appropriate. Keep in mind what may reasonably be expected of an average child of the same age.

	Very Low	Low	Average	High	Very High
1. Clear, fluent expression of ideas	1	2	3	4	5
2. Overall appearance	1	2	3	4	5
3. Friendliness to adults	1	2	3	4	5
4. Keen hearing	1	2	3	4	5
5. Physical coordination	1	2	3	4	5
6. Clean face and hands	1	2	3	4	5
7. Artistic talent: drawing, music, dancing, dramatic play	1	2	3	4	5
8. Attractive face	1	2	3	4	5
9. Poise with adults	1	2	3	4	5
10. Healthy hair	1	2	3	4	5
11. Overall athletic ability	1	2	3	4	5
12. Appropriate clothing	1	2	3	4	5
13. Entertaining conversation	1	2	3	4	5
14. Good posture	1	2	3	4	5
15. Responsiveness to adults	1	2	3	4	5

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		Very Low	Low	Average	High	Very High
16.	Healthy skin color and tone	1	2	3	4	5
17.	Running speed	1	2	3	4	5
18.	Hair well groomed	1	2	3	4	5
19.	Story telling, relating events	1	2	3	4	5
20.	Pleasing body proportions	1	2	3	4	5
21.	Eye contact with adults	1	2	3	4	5
22.	Overall physical health	1	2	3	4	5
23.	Quick, skillful movement	1	2	3	4	5
24.	Clean, neat clothing	1	2	3	4	5

Social Assets Inventory

Scoring Form

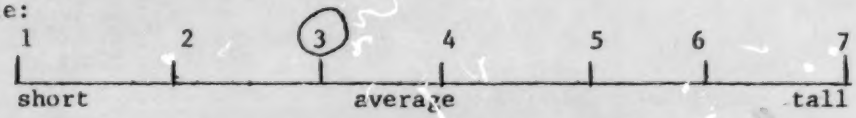
(Short Form, July 1979)

						Total
I	Verbal and Artistic Expressiveness	1___	7___	13___	19___	____
II	Appearance	2___	8___	14___	20___	____
III	Relationship with Adults	3___	9___	15___	21___	____
IV	Health	4___	10___	16___	22___	____
V	Athletic Ability	5___	11___	17___	23___	____
VI	Grooming	6___	12___	18___	24___	____

Traits

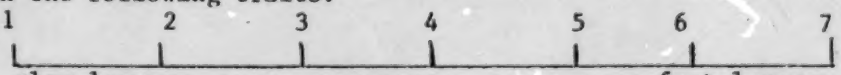
Compared with other children the same age, how would you describe this child on the traits listed below? For example, if the item had to do with height, and the child was just a little shorter than average, you might mark it as follows:

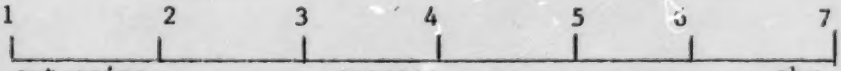
Example:

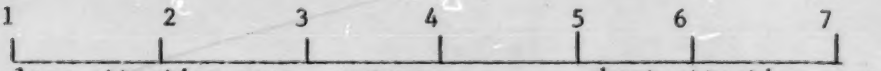


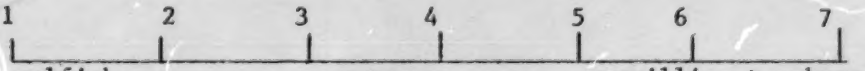
(Example)

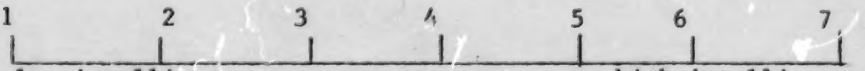
Please circle a number on each line below to show where you would rate this child on the following traits:

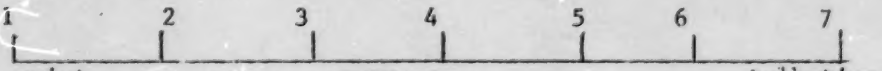
1. 

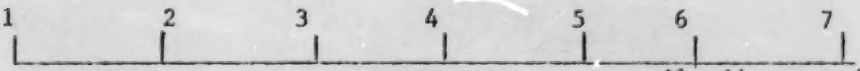
2. 

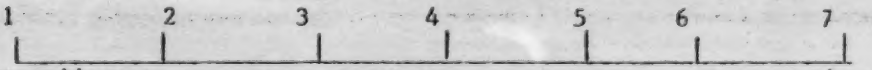
3. 

4. 

5. 

6. 

7. 

8. 

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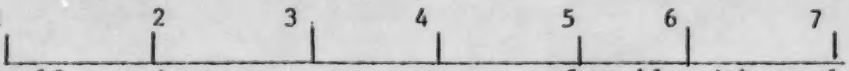
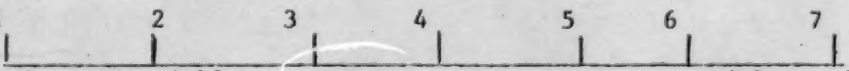
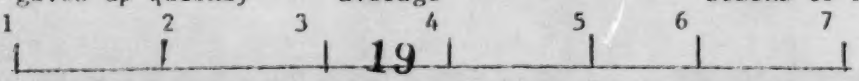
10. 

11. 

12. 

Traits

Scoring Form

Intelligence = item 1 + item 5 - item 9 + 6

Extraversion = - item 2 + item 6 + item 10 + 6

Task orientation = - item 3 - item 7 + item 11 + 14

Considerateness = item 4 + item 8 - item 12 + 6

(Value 6 or 14 is added so that scores cannot be negative. Range for each scale is 1 to 19)